

ABSTRACT

A queuing architecture and method for scheduling disk drive access requests in a video server. The queuing architecture employs a controlled admission policy that
5 determines how a new user is assigned to a specific disk drive in a disk drive array. The queuing architecture includes, for each disk drive, a first queue for requests from users currently receiving information from the server, and a second queue for all other disk access
10 requests, as well as a queue selector selecting a particular first queue or second queue for enqueueing a request based on the controlled admission policy. The controlled admission policy defines a critical time period such that if a new user request can be fulfilled without
15 causing a steady-state access request for a particular disk drive to miss a time deadline, the new user request is enqueued in the second queue of the particular disk drive; otherwise, the controlled admission policy enqueues the new user request in a second queue of another disk
20 drive.